

**REMARKS**

Claims 1-5, 8-12, 14, 15, 17-29 and 31-36 are pending in this application, of which claims 1, 12 and 19 have been amended. No new claims have been added.

Claim 12 stands objected to for an informality which has been corrected in the aforementioned amendments.

Claims 1 and 3 stand rejected under 35 USC §102(b) as anticipated by JP 60-233904 to Noriyuki (hereinafter "**Noriyuki**").

Applicants respectfully traverse this rejection.

**Noriyuki** discloses an antenna comprising a core of laminated rectangular plates with coils 6a and 6b wrapped in a direction perpendicular to the greater rectangular dimension of the magnetic core. This is in contrast to the present invention in which the coils are wrapped in a direction parallel to the greater rectangular dimension of the magnetic core.

Accordingly, claim 1 has been amended to recite that the windings are arranged parallel to a greater rectangular dimension of the core.

Thus, the 35 USC §102(b) rejection should be withdrawn.

Claims 1, 3, 8 and 11 stand rejected under 35 USC §102(e) as anticipated by U.S. Patent 5,567,537 to Yoshizawa et al. (hereinafter "**Yoshizawa et al.**").

Applicants respectfully traverse this rejection.

**Yoshizawa et al.** discloses a magnetic core element for use in a thin antenna. The magnetic core element has a thickness of 25  $\mu\text{m}$  or less and is made of a particular amorphous alloy strip or a particular nano-crystalline alloy strip. A thin antenna having a laminated

magnetic core made of the magnetic core elements is highly resistant to deformation and has a high Q-value.

The Examiner has urged that Fig. 1 shows that the coil 2 is wound on the core 1 parallel to a greater rectangular dimension of the core.

Applicants respectfully disagree. Fig. 1 appears to show just the opposite; that the windings of the coil are perpendicular to a greater rectangular dimension of the core.

Thus, the 35 USC §102(e) rejection should be withdrawn.

Claims 12, 14, 15, 17-29 and 31-35 stand rejected under 35 USC §103(a) as unpatentable over Yoshizawa et al. in view of U.S. Patent 3,683,389 to Hollis (hereinafter "Hollis").

Applicants respectfully traverse this rejection.

Hollis discloses an antenna array for use with a system for receiving signals from a radio capsule disposed within a patient's gastrointestinal tract. The array of antennas comprises three mutually perpendicular loop antennas, two of which are ferrite-core loop antennas disposed near the center of the array, the third being a loop antenna surrounding the two ferrite-core antennas. The antenna array includes means for matching the impedance of the loop antennas to transmission lines to which they are to be connected.

Fig. 2 of Hollis specifically shows how the loop antenna surrounds the two ferrite-core antennas.

This is in contrast to the present invention, as shown in Fig. 4a, in which the antennas are entirely separated from each other and none of the wound conductors overlap.

Accordingly, claim 12 has been amended to recite this distinction.

Furthermore, Hollis, like Yoshizawa et al., fails to disclose a coil having windings wound on said magnetic core such that the windings are arranged parallel to a greater rectangular dimension of said magnetic core, as in the present invention.

Accordingly, claim 19 has been amended to recite this distinction.

Thus, the 35 USC §103(a) rejection should be withdrawn.

Claims 2, 4, 5, 9 and 36 stand rejected under 35 USC §103(a) as unpatentable over

Yoshizawa et al.

Applicants respectfully traverse this rejection.

As noted above, Yoshizawa et al. fails to disclose the limitations of claim 1, as amended.

Thus, the 35 USC §103(a) rejection should be withdrawn.

Claims 1 and 19 stand rejected under 35 USC §103(a) as unpatentable over Wennerberg in view of D'Hont (both previously applied).

Claims 1-5, 8-11, 19-29 and 36 stand rejected under 35 USC §103(a) as unpatentable over D'Hont in view of Wennerberg, Spears, or Fujimoto et al. (all previously applied).

Claims 12, 14, 15, 17 and 18 stand rejected under 35 USC §103(a) as unpatentable over Stevens et al. in view of Takizawa et al. and D'Hont (all previously applied).

Claims 32-35 stand rejected under 35 USC §103(a) as unpatentable D'Hont in view of Stevens et al. and Takizawa et al. (all previously applied).

Applicants respectfully traverse all these rejections.

As noted in Applicants' last response of September 13, 2001, D'Hont discloses a flat,

flexible antenna to be incorporated into a badge or similar object. Fig. 6 shows a coil 38 spirally wound on a strip of wires 36. Fig. 7 shows the wires being formed into several separate stacks of flat strips 42, 44, 46 and 48.

Wennerberg discloses a magnetic antenna apparatus having a solid ferrite core and a set of windings 11 parallel to the shorter rectangular dimension of the solid ferrite core and a set of windings 12 parallel to the longer rectangular dimension of the solid ferrite core.

Spears discloses a loop antenna coil 22 wrapped around the longer dimension of a closed rectangularly-shaped magnetic core loop.

Fujimoto, et al. discloses a magnetic antenna using a solid magnetic core with two square-shaped apertures 8,8'. A "pumping coil 12" is wound on the part of the core between apertures 8 and 8'.

The several stacks of flat strips 42, 44, 46, and 48 in the magnetic core of D'Hont teaches away from the present invention in which there is only a single stack of rectangular thin plates, as recited in claim 1 of the present invention.

Furthermore, despite the Examiner's assertions to the contrary, Fig. 3 of D'Hont fails to show any relationship of the orientation of the coil and the dimensions of the flat plates forming the core, as recited in claims 1 and 19. In fact, Fig. 3 of D'Hont does not appear to show a rectangular shape for the plates having different dimensions for length and width.

None of the other cited references teaches, mentions, or suggests that the magnetic core consists of a single stack of flat plates, as recited in claims 1 and 19.

Stevens, et al. discloses a radio broadcast communication system with multiple loop antennas, specifically a loop air core antenna 46 having an axis perpendicular to ferrite core antenna 48.

Takizawa, et al. discloses a broadcasting wave reception antenna have a magnetic core having multiple radial projections extending on a common plane, and respective projections are provided with coils wound on them.

None of the references teaches, mentions or suggests, three antennas having mutually perpendicular axes, as recited in claims 12 and 32.

Despite the Examiner's arguments to the contrary, the combination of the cited references teaches only pairs of antennas having mutually perpendicular axes, and cannot be said to teach, mention, or suggest any arrangement of three (3) antennas having mutually perpendicular axes, as recited in claims 12 and 32.

Thus, all prior art rejections should be withdrawn.

In view of the aforementioned amendments and accompanying remarks, claims 1-5, 8-12, 14, 15, 17-29 and 31-36, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other

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fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosure: Petition for Extension of Time

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